Mr. Keith Oeth
B&M Plastics, Inc.
P.O. Box 988
Mount Vernon, IN 47620

Dear Mr. Oeth:

Re: Exempt Construction and Operation Status,
129-14255-00047

The application from B&M Plastics, Inc., received on April 6, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following polycarbonate plastic processing plant, to be located at 1721 Leonard Road, Mount Vernon, IN 47620, is classified as exempt from air pollution permit requirements:

(a) Five (5) extruders, labeled Extruder #1-5, have a combined maximum capacity of 4,150 lbs/hr. The extruders are controlled by a baghouse and vented through stack #1.

(b) Two (2) R&D extruders, labeled R&D#1 and R&D#2 have a combined maximum capacity of 75 lbs/hr. The R&D extruders vent through stack #4.

(c) Four (4) blenders, labeled Blender #1-4, have a combined maximum capacity of 78,000 lbs. The blenders are controlled by a blender dust collector.

(d) Three (3) silos - Railroad have a combined maximum capacity of 375,000 lbs. These silos are controlled by silo filters that are considered integral to the process that have a total filter area of 216 ft^2. The material is transferred to the silos by pneumatic conveyance.

(e) Four (4) silos - Truck have a combined maximum capacity of 500,000 lbs. These silos are controlled by silo filters that are considered integral to the process that have a total filter area of 432 ft^2. The material is transferred to the silos by pneumatic conveyance.

(f) One (1) Thermal Care water cooling tower has a maximum capacity of 125 gallons/minute. The water cooling tower uses sodium hypochlorite as a de-scaling chemical.

(g) Degreasing operation consisting of a blender cleaner and a parts washer. The solvent consumption for the parts washer is one (1) pint per month and less than one (1) gallon per day for the blender cleaner.

(h) Three (3) extruders, labeled Extruder #6-8, have a combined maximum capacity of 2,050 lbs/hr. The extruders are controlled by a baghouse and vented through Stack #6.

(i) Four (4) blenders, labeled Blender #5-8, have a combined maximum capacity of 2,300 lbs/hr. The blenders are controlled by a blender dust collector.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

2. Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the blender operations shall not exceed 8.7 pounds per hour when operating at a maximum process weight of 6,200 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

$E = 4.10 \times (3.1)^{0.67} = 4.10 \times 2.13 = 8.7$ pounds PM/hr.

The source must maintain monthly records of the amount of PM collected in the baghouse to insure that emissions do not exceed exemptions thresholds.

3. Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the owner or operator shall:

(a) Equip the cleaner with a cover;

(b) Equip the cleaner with a facility for draining cleaned parts;

(c) Close the degreaser cover whenever parts are not being handled in the cleaner;

(d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;

(e) Provide a permanent, conspicuous label summarizing the operation requirements;

(f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

4. Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaner degreaser facility construction of which commenced after July 1, 1990, shall ensure that the following control equipment requirements are met:

(a) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:

(1) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius ($38^{O}C$) (one hundred degrees Fahrenheit ($100^{O}F$));

(2) The solvent is agitated; or

(3) The solvent is heated.

(b) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

(c) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).

(d) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.

(e) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38^{O}C) (one hundred degrees Fahrenheit (100^{O}F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9^{O}C) (one hundred twenty degrees Fahrenheit (120^{O}F)):

(1) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.

(2) A water cover when solvent is used is insoluble in, and heavier than, water.

(3) Other systems of demonstrated equivalent control such as a refrigerated chiller of carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.

5. Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:

(a) Close the cover whenever articles are not being handled in the degreaser.

(b) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.

(c) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/AR

cc: File - Posey County
Posey County Health Department
Air Compliance - Scott Anslinger
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Exemption

Source Background and Description

Source Name: B&M Plastics, Inc.
Source Location: 1721 Leonard Road, Mount Vernon, IN 47620
County: Posey
SIC Code: 3087
Operation Permit No.: 129-14255-00047
Permit Reviewer: ERG/AR

The Office of Air Quality (OAQ) has reviewed an application from B&M Plastics, Inc. relating to the construction and operation of a polycarbonate plastic processing plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Five (5) extruders, labeled Extruder #1-5, have a combined maximum capacity of 4,150 lbs/hr. The extruders are controlled by a baghouse and vented through stack #1.

(b) Two (2) R&D extruders, labeled R&D#1 and R&D#2 have a combined maximum capacity of 75 lbs/hr. The R&D extruders vent through stack #4.

(c) Four (4) blenders, labeled Blender #1-4, have a combined maximum capacity of 78,000 lbs. The blenders are controlled by a blender dust collector.

(d) Three (3) silos - Railroad have a combined maximum capacity of 375,000 lbs. These silos are controlled by silo filters that are considered integral to the process that have a total filter area of 216 ft^2. The material is transferred to the silos by pneumatic conveyance.

(e) Four (4) silos - Truck have a combined maximum capacity of 500,000 lbs. These silos are controlled by silo filters that are considered integral to the process that have a total filter area of 432 ft^2. The material is transferred to the silos by pneumatic conveyance.

(f) One (1) Thermal Care water cooling tower has a maximum capacity of 125 gallons/minute. The water cooling tower uses sodium hypochlorite as a de-scaling chemical.

(g) Degreasing operation consisting of a blender cleaner and a parts washer. The solvent consumption for the parts washer is one (1) pint per month and less than one (1) gallon per day for the blender cleaner.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

(a) Three (3) extruders, labeled Extruder #6-8, have a combined maximum capacity of 2,050 lbs/hr. The extruders are controlled by a baghouse and vented through Stack #6.

(b) Four (4) blenders, labeled Blender #5-8, have a combined maximum capacity of 2,300 lbs/hr. The blenders are controlled by a blender dust collector.

Existing Approvals

The source has been operating under previous approvals.

All conditions from previous approvals were incorporated into this permit.

Air Pollution Control Justification as an Integral Part of the Process

The company has submitted the following justification such that the silo filters be considered as an integral part of the silo:

(a) The silo filters are used as product separators in a pneumatic conveyance system.

IDEM, OAQ has evaluated the justifications and agreed that the silo filters will be considered as an integral part of the silos. Therefore, the permitting level will be determined using the potential to emit after the silo filters. Operating conditions in the proposed permit will specify that these silo filters shall operate at all times when the silos are in operation.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
#1 Bldg. 1	Extruder #1-5	18	1.92	N/A	Ambient + 5EF and 15EF
#2 Bldg. 2	BKA P/L burner #61	28.8.	.83	N/A	Not in use
#3 Bldg. 6	Lab hood vent	20	N/A	N/A	N/A
#4 Bldg.	R&D Extruder 1 & 2	16	.500	N/A	N/A
#5 Bldg. 6	Flame hood in lab	20	N/A	N/A	N/A
#6 Bldg. 4 East	Extruder #6-8	In design process	N/A	N/A	N/A

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on April 11, 2001, with additional information received on May 22, June 15, and July 5, 2001.

Emission Calculations

See Appendix A of this document pages 1 through 7 for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.68
PM-10	0.68
SO_2	—
VOC	0.09
CO	14.29
NO_x	—

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of criteria pollutants is less than 25 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-6.1.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of pollutants is less than the levels listed in 326 IAC 2-1.1-3(d)(1), therefore, the source is subject to the provisions of 326 IAC 2-1.1-3.

(d) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(e) This type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2.

County Attainment Status

The source is located in Posey County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Posey County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Posey County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,

(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and

(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

(c) The degreasing operation does not use any halogenated solvents, therefore 40 CFR Part 63, Subpart T does not apply.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is located in Posey County and the potential to emit any criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The operation of this polycarbonate plastic processing plant will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the blender operations shall not exceed 8.7 pounds per hour when operating at a maximum process weight of 6,200 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

$E = 4.10 \times (3.1)^{0.67} = 4.10 \times 2.13 = 8.7$ pounds PM/hr.

326 IAC 8-3-1(Organic Solvent Degreasing Operations)

The degreasing operations were built after January 1, 1980, therefore 326 IAC 8-3-1 Section 2 applies. Section 5 also applies to this equipment because it was built after July 1, 1990.

Conclusion

The construction and operation of this polycarbonate plastic processing plant shall be subject to the conditions of the attached Exemption 129-14255-00047.

Appendix A: Emission Calculations
Emissions From the Extruder Baghouse
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

PM emission given for the extruder	0.7475 lb/wk
baghouse:	**0.027284 tpy**

Appendix A: Emission Calculations
Emissions From the Silo Filters
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

	0.5253 lb/wk
PM emission given for the silo filters:	**0.019173 tpy**

Appendix A: Emission Calculations

Emissions From the Water Cooling Tower

Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

Cooling Water Flowrate:	7500	Gallons/hr
PM 10 Emission Factor (AP-42 section13)	0.019	Lbs/1000 Gallons
PM Emissions	0.1425	Lbs/hr
	0.62415	**tpy**

Methodology:
=(7500 gallons/hour)*(1/1000 gallons)*(Emission Factor)*(8760 hours/1 year)*(1 ton/2000 pounds)

Appendix A: Emission Calculations
Emissions From the Blender Dust Collector
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

PM emission given for the blender dust	0.18 lb/wk
collector:	**0.01 tpy**

Methodology
=(.18 pounds/5 days)*(1 day/24 hours)*(8760 hours/1 year)*(1 ton/2000 pounds)

Appendix A: Emission Calculations
Emissions From the Degreaser Operations
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: *#######*

Parts Washer:

Uses:	1	pint/month
	1.5	gal/y
	100%	Volatility
Calculation of VOC Emissions =	**0.00483**	**tpy**

Blender Cleaner:

Uses:	1	gal/day
	365	gal/y
reference density =	8.3456765	lb/gal
specific gravity =	1.063	
density =	8.87145	
	5%	Volatility
Calculation of VOC Emissions =	**0.080952**	**tpy**

Total = 0.085782 tpy

Appendix A: Emission Calculations
Emissions From the Extruders
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

Given CO Emissions for extruders: 14.29 tpy

Appendix A: Emission Calculations
Summary of Emission Calculations
Company Name: **B & M Plastics**
Address City IN Zip: **1721 Leonard Road, Mount Vernon, Indiana 47620**
CP: **029-13820**
Plt ID: **029-00018**
Reviewer: **ERG/ADR**
Date: **06-Jul-01**

	Potential Emissions in Tons/Year					
	PM	PM-10	SO_2	VOC	CO	No_x
Baghouse	0.03	0.03	0	0	0	0
Dust Collector	0.01	0.01	0	0	0	0
Cooling Tower	0.62	0.62	0	0	0	0
Silo Filters	0.02	0.02	0	0	0	0
Degreasers	0.00	0.00	0	0.09	0	0
Extuders	0.00	0.00	0	0.00	14.29	0
Total	**0.68**	**0.68**	**0**	**0.09**	**14.29**	**0**

	Potential Emissions in Pounds/Hour					
	PM	PM-10	SO_2	VOC	CO	No_x
Baghouse	0.01	0.01	0	0	0	0
Dust Collector	0.00	0.00	0	0	0	0
Cooling Tower	0.14	0.14	0	0	0	0
Silo Filters	0.00	0.00	0	0	0	0
Degreasers	0.00	0.00	0	0.02	0	0
Extuders	0.00	0.00	0	0.00	3.26	0
Total	**0.15**	**0.15**	**0**	**0.02**	**3.26**	**0**

	Controlled Emissions in Tons/Year					
	PM	PM-10	SO_2	VOC	CO	No_x
Baghouse	0.00	0.00	0	0	0	0
Dust Collector	0.00	0.00	0	0	0	0
Cooling Tower	0.62	0.62	0	0	0	0
Silo Filters	0.02	0.02	0	0	0	0
Degreasers	0.00	0.00	0	0.09	0	0
Extuders	0.00	0.00	0	0.00	14.29	0
Total	**0.64**	**0.64**	**0**	**0.09**	**14.29**	**0**

	Controlled Emissions in Pounds/Hour					
	PM	PM-10	SO_2	VOC	CO	No_x
Baghouse	0.00	0.00	0	0	0	0
Dust Collector	0.00	0.00	0	0	0	0
Cooling Tower	0.14	0.14	0	0	0	0
Silo Filters	0.00	0.00	0	0	0	0
Degreasers	0.00	0.00	0	0.02	0	0
Extuders	0.00	0.00	0	0.00	3.26	0
Total	**0.15**	**0.15**	**0**	**0.02**	**3.26**	**0**